

SURVEILLANCE REPORT

Monthly measles and rubella monitoring report

April 2018

Measles

This report presents measles and rubella surveillance data submitted by 30 EU/EEA countries to the European Surveillance System (TESSy) for the period of 1 March 2017 to 28 February 2018. ECDC also monitors European measles outbreaks through epidemic intelligence and publishes the most recent updates monthly in the [Communicable Disease Threats Report \(CDTR\)](#).

ECDC also published a [Rapid Risk Assessment \(RRA\)](#) on the prevailing risk of measles transmission in the EU/EEA in March 2018.

February 2018

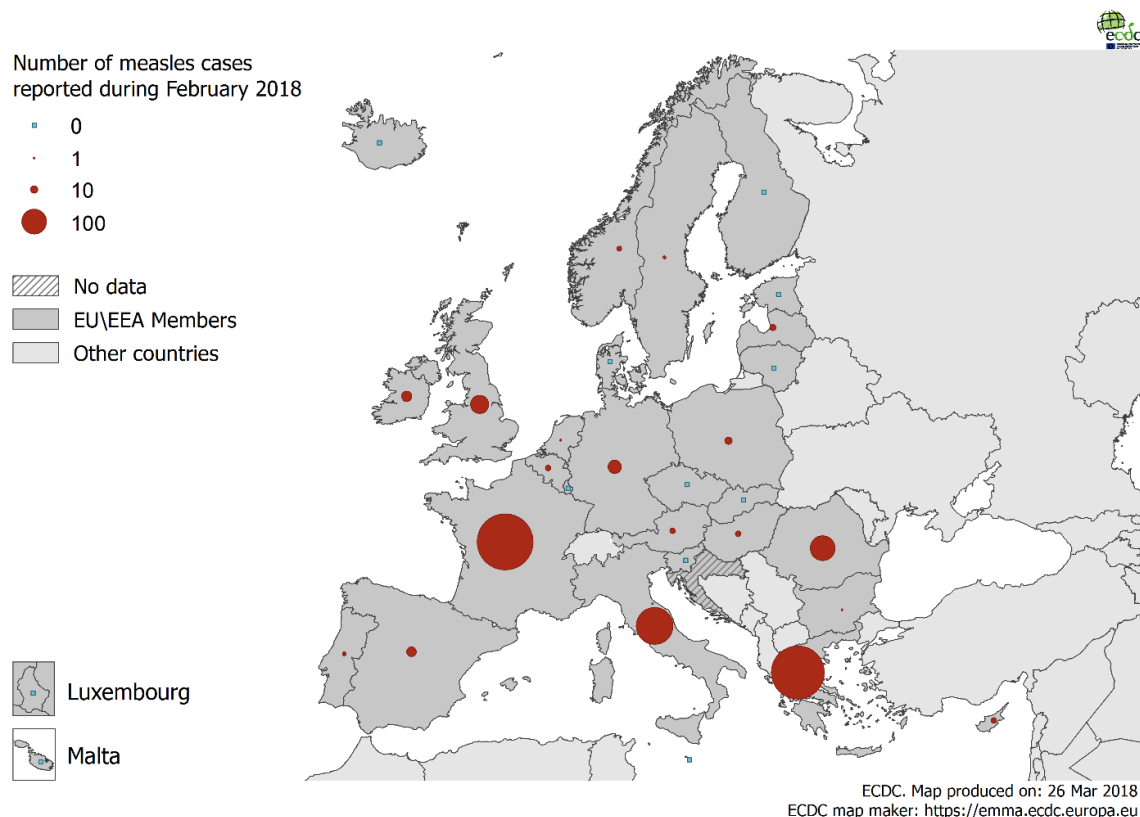
Nineteen EU/EEA countries reported 1 456 cases of measles for February 2018 (Source: TESSy). France, Greece and Italy in particular, continued to report increasing numbers of cases. Croatia did not report data for February 2018. The distribution of cases by country for February 2018 is presented in Figure 1.

France reported 509 cases for February 2018, an increase from 236 cases (including one death) in January 2018 and 65 in December 2017. For more information on this outbreak, see the most recent updates from the [French National Institute of Public Health \(Santé Publique France\)](#) of 5 April 2018 and the [CDTR](#) of 13 April 2018.

Greece reported 453 cases (including one death) in February 2018, compared with 431 cases in January 2018 and 342 cases in December 2017. For more information on this outbreak, see the most recent updates from the [Hellenic Centre for Disease Control and Prevention \(HCDCP\)](#) and the [CDTR](#) of 13 April 2018.

For February 2018, Italy reported 223 cases which was an increase from 188 cases (including two deaths) reported for January 2018 and 114 cases reported for December 2017. The most recent updates on this outbreak are available from the [National Centre for disease prevention and health promotion of Italy \(Centro nazionale per la prevenzione delle malattie e la promozione della salute\)](#) and the [CDTR](#) of 13 April 2018. Measles outbreaks are also ongoing in other EU/EEA countries ([CDTR](#), [Rapid Risk Assessment: risk of measles transmission in the EU/EEA](#)).

Figure 1. Distribution of measles cases by country, February 2018 (n=1 456), EU/EEA countries



March 2017–February 2018

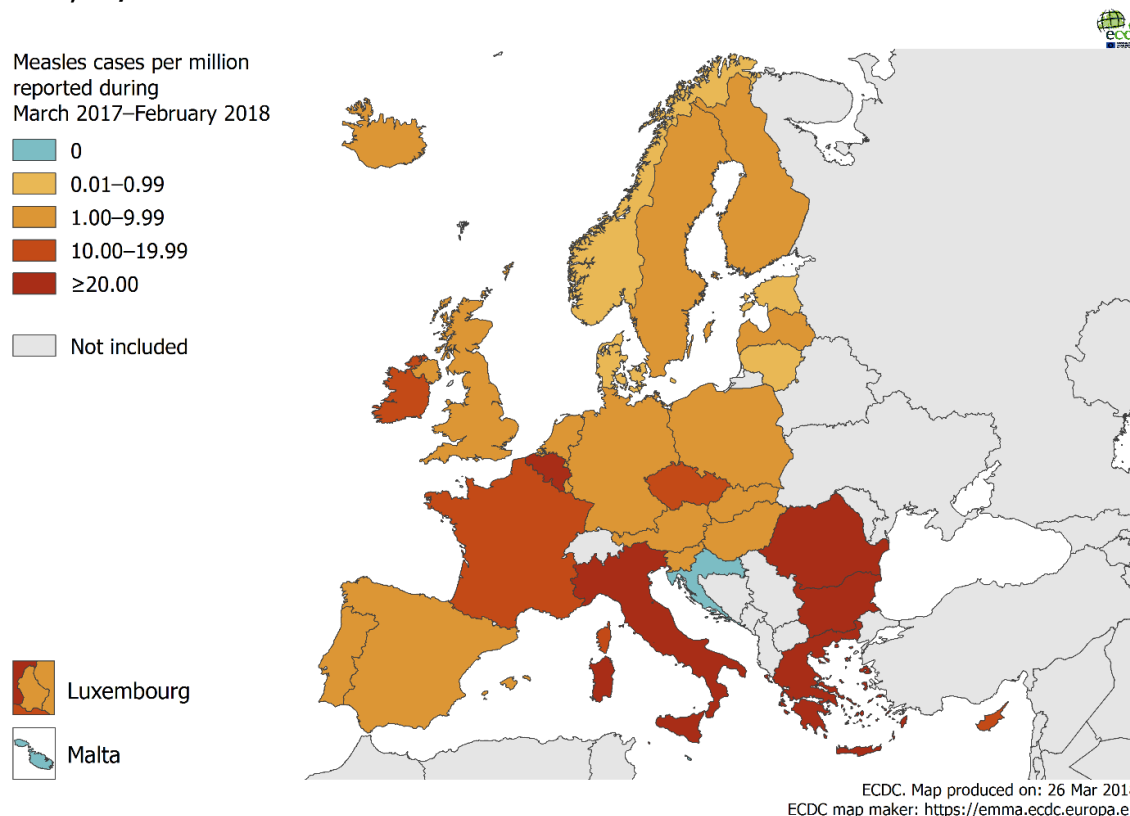
Between 1 March 2017 and 28 February 2018, 28 EU/EEA Member States reported 14 813 cases of measles (Source: TESSy). Only Croatia and Malta reported zero cases in this period. The number of measles cases reported to TESSy may be an underestimation, in particular for Romania. The ongoing outbreak in the country has caused delays in case-based reporting to ECDC and the most up-to-date data are available from the [Romanian National Institute of Public Health \(INSP\)](#). ECDC previously published a [rapid risk assessment](#) on the outbreak in Romania.

During the period from 1 March 2017 to 28 February 2018, most cases were reported by Italy (5 039), Romania (4 481), Greece (1 851) and France (1 175), accounting for 34%, 30%, 12% and 8%, respectively, of all cases reported by EU/EEA countries. The diagnosis of measles was confirmed by positive laboratory results (serology, virus detection or isolation) in 63% of all reported cases. The number of cases by month and notification rate per million population per country for this 12-month period is presented in Table 1. Figure 2 shows the notification rate per million population by country for this period.

Table 1. Number of measles cases by month and notification rate per million population by country, 1 March 2017–28 February 2018, EU/EEA countries

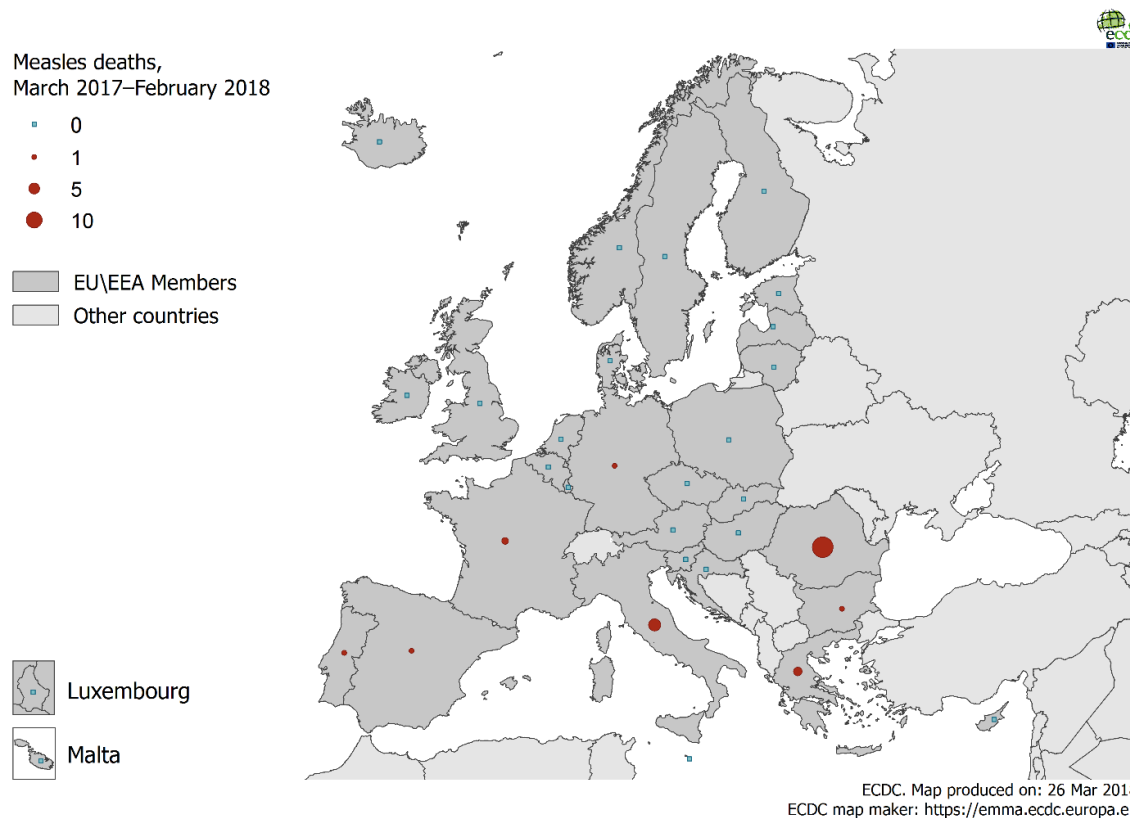
Country	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb			
Austria	8	2	6	1	2	2	1	2	8	1	7	6	46	5.3	36
Belgium	150	35	21	34	16	0	2	0	3	1	1	6	269	23.8	180
Bulgaria	19	41	57	44	5	0	0	0	0	0	0	1	167	23.3	87
Croatia	0	0	0	0	0	0	0	0	0	0	0	NR	0	0.0	0
Cyprus	0	0	1	2	0	0	0	0	0	0	5	6	14	16.5	14
Czech Republic	21	64	43	7	1	0	0	0	6	4	0	0	146	13.8	140
Denmark	1	0	0	0	0	3	0	0	0	0	0	0	4	0.7	4
Estonia	0	0	1	0	0	0	0	0	0	0	0	0	1	0.8	1
Finland	0	0	0	1	4	5	0	0	0	0	0	0	10	1.8	10
France	49	62	114	43	39	15	19	13	11	65	236	509	1 175	17.6	618
Germany	212	178	137	77	23	51	16	9	9	14	26	30	782	9.5	551
Greece	0	0	3	1	7	71	126	167	250	342	431	453	1 851	171.7	1 095
Hungary	3	0	0	0	9	10	1	1	0	0	2	5	31	3.2	31
Iceland	2	0	0	0	0	0	0	0	1	0	0	0	3	9.0	3
Ireland	1	0	0	0	0	0	0	10	9	5	13	19	57	12.1	45
Italy	976	863	804	661	600	251	166	126	67	114	188	223	5 039	83.1	4 012
Latvia	0	0	0	0	0	0	0	0	0	0	7	7	14	7.1	14
Lithuania	0	1	0	0	1	0	0	0	0	0	0	0	2	0.7	2
Luxembourg	3	0	0	0	0	0	0	0	1	0	0	0	4	6.9	4
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Netherlands	0	2	6	2	1	1	1	3	0	0	0	1	17	1.0	16
Norway	0	0	0	0	1	0	0	0	0	0	0	4	5	1.0	5
Poland	5	4	2	4	6	1	12	13	3	1	17	10	78	2.1	52
Portugal	10	18	4	0	0	0	0	0	0	0	0	3	35	3.4	30
Romania	1 338	1 220	1 029	100	100	100	91	101	102	100	100	100	4 481	226.8	1 773
Slovakia	0	1	0	0	0	0	0	0	0	5	1	0	7	1.3	7
Slovenia	0	0	0	0	0	0	0	0	0	1	2	0	3	1.5	3
Spain	22	10	38	19	9	10	2	0	1	11	6	16	144	3.1	132
Sweden	7	3	4	0	0	2	2	2	0	11	17	2	50	5.1	50
United Kingdom	8	17	34	25	22	12	18	22	65	46	54	55	378	5.8	378
EU/EEA	2 835	2 521	2 304	1 021	846	534	457	469	536	721	1 113	1 456	14 813	28.7	9 293

Figure 2. Measles notification rate per million population by country, 1 March 2017–28 February 2018, EU/EEA countries



Thirty-two deaths due to measles were reported to TESSy during the 12-month period; with 17 in Romania, six in Italy, three in Greece, two in France and one each in Bulgaria, Germany, Portugal and Spain (Figure 3).

Figure 3. Distribution of measles deaths by country, 1 March 2017–28 February 2018 (n=32), EU/EEA countries



Importation status was known for 13 666 cases (92%) and was reported by 27 countries. Among cases with known importation status, 11 204 (82%) were reported to be endemic, 2 044 (15%) import-related and 418 (3%) imported. Cases were classified as imported if there was virological and/or epidemiological evidence of exposure outside the region or country 7–18 days prior to rash onset. Cases were classified as import-related if they were locally acquired infections caused by imported virus, as supported by epidemiological and/or virological evidence.

Of 14 813 cases with known age, 5 157 (35%) were children less than five years of age, while 6 894 (47%) were aged 15 years or older. The highest incidence was reported in children below one year of age (349.3 cases per million) and children from 1 to 4 years of age (159.3 cases per million). These data are also published in the [ECDC Surveillance Atlas of Infectious Diseases](#).

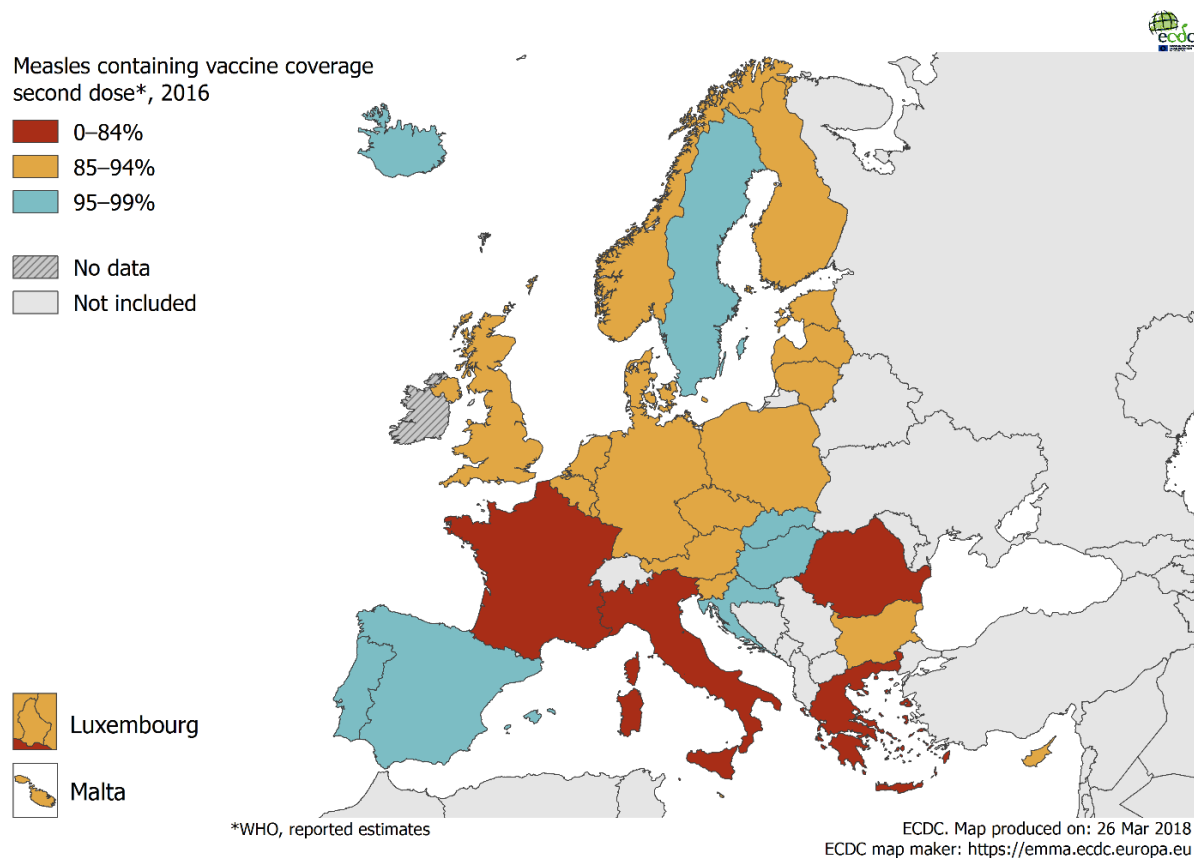
Of 13 564 cases with known vaccination status, 86% were unvaccinated, 9% were vaccinated with one dose of measles-containing vaccine, 3% were vaccinated with two or more doses, and 2% were vaccinated with an unknown number of doses. Of all cases, 8% had an unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 25–29 years, reaching 17%.

The proportion of unvaccinated cases was highest among children below one year of age (95%), who are too young to have received the first dose of the measles vaccine. Infants below the age of one year are particularly vulnerable to complications of measles and are best protected by herd immunity, which is achieved when population coverage for the second dose of a measles-containing vaccine is at least 95%.

Among cases aged one to four years, 85% of the cases were unvaccinated, 11% were vaccinated with one dose, 1% with two doses or more, 1% with an unknown number of doses and 3% had an unknown vaccination status.

Measles continues to spread across Europe as the vaccination coverage in many EU/EEA countries is suboptimal. The vaccination coverage in 2016 for the second dose of measles-containing vaccine was below 95% in 22 of 29 EU/EEA countries with data. The latest available data on national [vaccination coverage](#) for the second dose of measles-containing vaccine are presented in Figure 4. If the elimination goal is to be reached, vaccination coverage for children and adults needs to increase in a number of countries as the vaccination coverage of both the first and the second dose must be at least 95% in all subnational levels to interrupt measles circulation.

Figure 4. Vaccination coverage for the second dose of measles-containing vaccine by country, 2016, WHO*, EU/EEA countries



Rubella

Between 1 March 2017 and 28 February 2018, EU/EEA Member States reported 692 cases of rubella (Source: TESSy). Belgium and France do not report rubella cases to TESSy. Croatia, Latvia and Norway did not report data for February 2018. Czech Republic did not report data for January and February 2018.

In the 12-month period, the highest number of cases were reported by Poland (492), Germany (72), Italy (60) and Austria (47) accounting for 71%, 10%, 9% and 7% of reported cases, respectively. The diagnosis of rubella was confirmed by positive laboratory results in 14% of all reported cases during this period. In February 2018, four EU/EEA countries reported 54 cases, of which 46 were reported by Poland.

The number of rubella cases by month and notification rate by country for the 12-month period is presented in Table 2; the distribution of cases by country for February 2018 is shown in Figure 5 and the notification rate per million population by country is shown in Figure 6.

Table 2. Number of rubella cases by month and notification rate per million population by country, 1 March 2017–28 February 2018, EU/EEA countries

Country	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb			
Austria	24	1	1	0	0	0	0	1	7	5	8	0	47	5.41	44
Bulgaria	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Croatia	0	0	0	0	0	0	0	0	0	0	0	NR	0	0.00	0
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Czech Republic	0	1	1	0	0	0	0	0	0	0	NR	NR	2	0.19	2
Denmark	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Estonia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Finland	0	0	0	0	0	0	0	1	0	0	0	0	1	0.18	1
Germany	8	7	9	9	6	4	4	9	5	3	4	4	72	0.88	8
Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Hungary	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Ireland	0	0	0	0	0	0	0	0	0	0	0	2	2	0.42	0
Italy	15	11	12	6	3	1	3	2	2	2	1	2	60	0.99	27
Latvia	0	0	0	0	0	0	0	0	0	0	0	NR	0	0.00	0
Lithuania	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Luxembourg	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Norway	0	0	0	0	0	0	0	0	0	0	0	NR	0	0.00	0
Poland	44	43	57	45	44	37	31	40	34	33	38	46	492	12.96	4
Portugal	1	0	0	0	0	0	2	0	0	0	0	0	3	0.29	0
Romania	0	1	2	0	1	2	0	0	1	0	1	0	8	0.40	6
Slovakia	0	1	0	0	0	0	0	0	0	0	0	0	1	0.18	0
Slovenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Spain	0	0	0	0	1	0	0	0	0	0	0	0	1	0.02	1
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
United Kingdom	0	1	0	0	0	0	0	1	1	0	0	0	3	0.05	3
EU/EEA	92	66	82	60	55	44	40	54	50	43	52	54	692	1.60	96

Figure 5. Distribution of rubella cases by country, February 2018 (n=54), EU/EEA countries

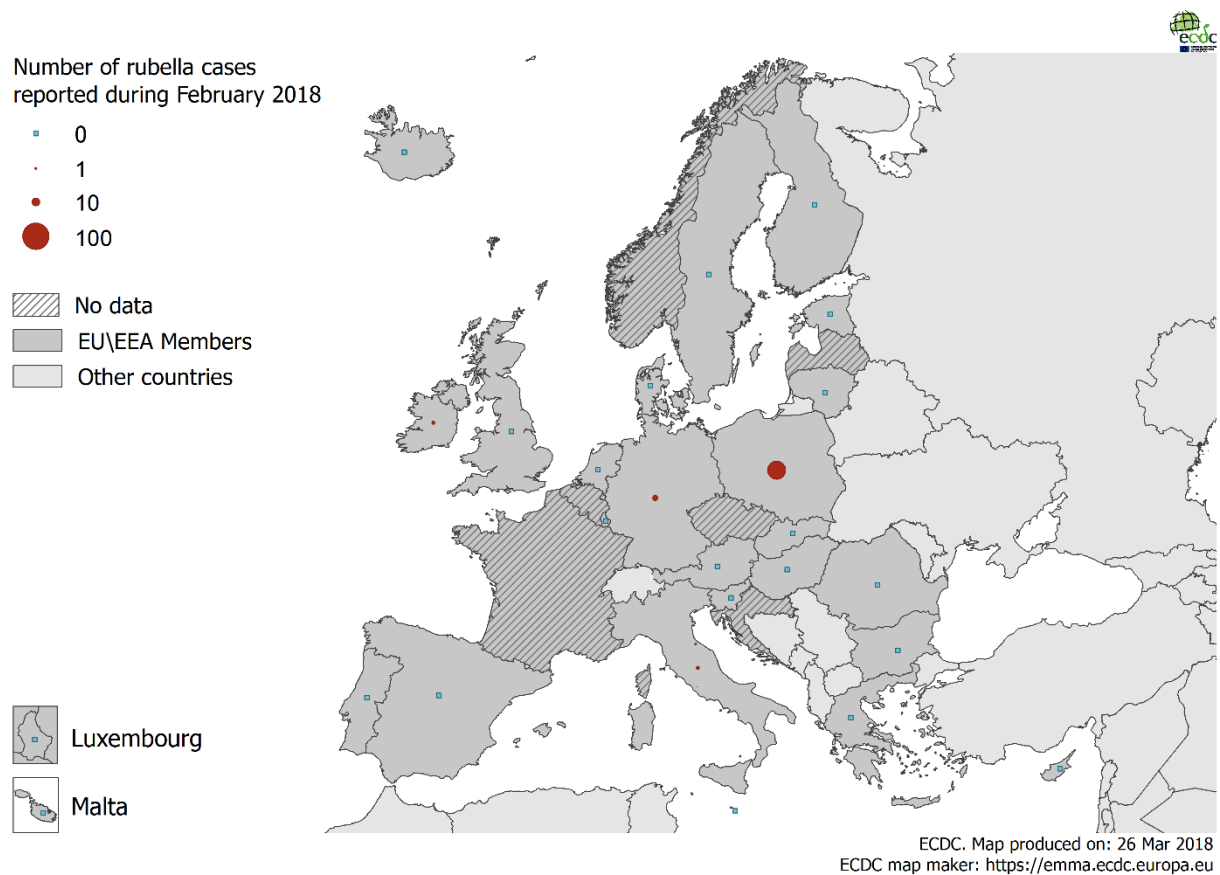
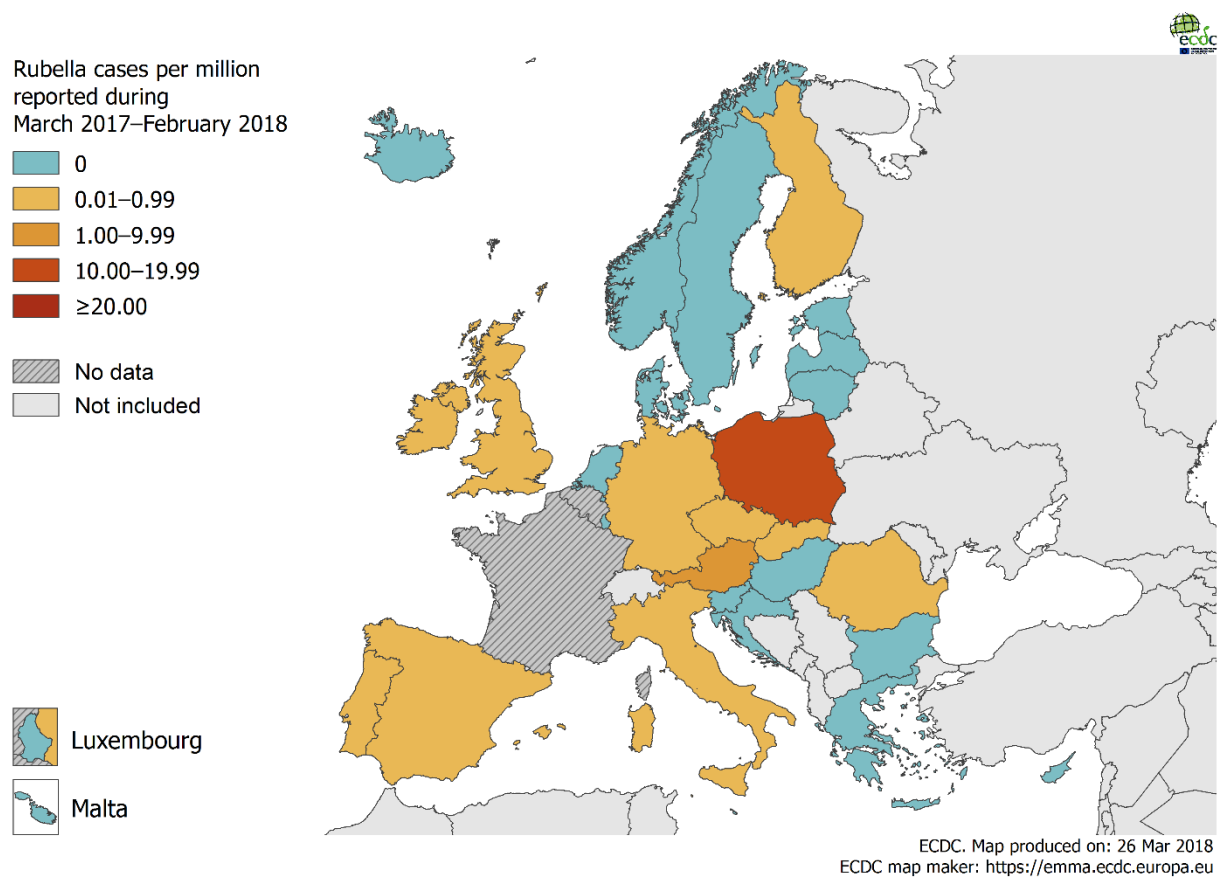


Figure 6. Rubella notification rate per million population by country, 1 March 2017–28 February 2018, EU/EEA countries



Data from Poland were reported in an aggregated format and should be interpreted with caution, as only four cases were confirmed through laboratory testing during the 12-month period. The highest number of cases in Poland was observed in children, with 48% of cases in children less than five years of age and 28% in children aged five to nine years.

ECDC monitors European rubella outbreaks on a monthly basis through epidemic intelligence. No new rubella outbreaks were detected in the EU/EEA since the last monthly update. Figure 7 shows the latest vaccination coverage data for the first dose of rubella-containing vaccine by country in the EU/EEA.

Figure 7. Vaccination coverage for the first dose of rubella-containing vaccine by country, 2016, WHO*, EU/EEA countries

